Paper No. 21

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte SCOTT R. SUMMERFELT,
HOWARD R. BERATAN and
BERNARD M. KULWICKI

Appeal No. 1998-1077
Application No. 08/458,999

ON BRIEF

Before GARRIS, LIEBERMAN and KRATZ, Administrative Patent Judges.

KRATZ, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 13 and 15-17, which are all of the claims pending in this application.

BACKGROUND

Appellants' invention relates to a method for forming a dielectric thin film on a substrate. An understanding of the

invention can be derived from a reading of exemplary claim 13, which is reproduced below.

13. A method of forming a dielectric thin film on a substrate, said method comprising:
combining lead and the constituents of barium and/or strontium titanate in a common solution;
calcining said common solution to form the constituents of barium and/or strontium lead titanate;
depositing said constituents of barium and/or strontium lead titanate on said substrate, thereby forming said thin film having an average grain size between 0.02 and 0.2 Fm.

The sole prior art reference of record relied upon by the examiner in rejecting the appealed claims is:

Furukawa et al. (Furukawa) 0 257 653 Mar. 02, 1988
(Published European Patent Application)

Claims 13 and 15-17 stand rejected under 35 U.S.C. § 112, first paragraph as lacking support in the original specification. Claims 13 and 15-17 stand rejected under 35 U.S.C. § 103 as being unpatentable over Furukawa.[1] Claims 13 and 15-17 stand provisionally rejected under the judicially

[1] The examiner refers to a published paper of Yamajai et al. and a published paper of Kinoshita et al. (paragraph bridging pages 6 and 7 of the answer). Those references are not included in the statement of the § 103 rejection and, therefore, are not properly before us. *See In re Hoch*, 428 F.2d 1341, 1342 n.3, 166 USPQ 406, 407 n.3 (CCPA 1970). Consequently, those references have not been considered in reaching our decision.

created doctrine of obviousness-type double patenting as being unpatentable over claims 13-19 of application No. 08/445,402.

Rather than reiterating the conflicting viewpoints advanced by the examiner and appellants regarding the above-noted rejections, we make reference to the examiner's answer and to appellants' brief filed December 23, 1996 for a complete exposition thereof.

DECISION

We shall not sustain any of the examiner's rejections. Our reasoning follows.

Rejection under § 112, first paragraph

At the outset, we observe that from our reading of the answer, including the rebuttal arguments therein, we determine that the examiner's rejection of the appealed claims under 35 U.S.C. § 112, first paragraph is premised on the written description requirement thereof.[2]

On this record, however, the examiner has not met the burden of establishing a prima facie case under the written description portion of that section of the statute.

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[2] We note that the examiner refers to this rejection as a "new matter" rejection at page 7 of the answer.

With regard to written descriptive support, all that is required is that appellants' specification reasonably convey to one of ordinary skill in the art that as of the filing date of the application, appellants were in possession of the presently claimed invention; how the specification accomplishes this is not material. See In re Kaslow, 707 F.2d 1366, 1375, 217 USPQ 1089, 1096 (Fed. Cir. 1983); In re Edwards, 568 F.2d 1349, 1351-352, 196 USPQ 465, 467 (CCPA 1978); In re Wertheim, 541 F.2d 257, 262, 191 USPQ 90, 96 (CCPA 1976). Concerning this matter, it is not necessary that the application describes the presently claimed invention exactly, but only sufficiently clearly that one of ordinary skill in the art would recognize from the disclosure that appellants invented it. See Edwards, 568 F.2d at 1351-352, 196 USPQ at 467; Wertheim, 541 F.2d at 262, 191 USPQ at 96.

"[T]he PTO has the initial burden of presenting evidence or reasons why persons skilled in the art would not recognize in the disclosure a description of the invention defined by the claims." Wertheim, 541 F.2d at 263, 191 USPQ at 97.

Precisely how close the original description must come to

comply with the § 112 written description requirement must be determined on a case-by-case basis. See Vas-Cath Inc. v. Mahurkar, 935 F.2d 1555, 1562, 19 USPQ2d 1111, 1116 (Fed. Cir. 1991).

The examiner (answer, pages 4, 7 and 8) argues that appellants' specification does not provide support for forming a

thin film of barium and/or strontium lead titanate with a grain size of 0.02 to 0.2 micrometers in a method as herein claimed. The examiner (answer, page 4) focuses on an average grain size for a bulk ceramic as measured by a line intercept method that is reported in a disclosed preferred embodiment of appellants' specification (page 7) and seemingly concludes therefrom that one of ordinary skill in the art would have understood that appellants' original disclosure only specifies such a larger grain size for a thin film formed from a lead enhanced perovskite material.

We do not agree since the examiner has not convincingly explained why the application taken as a whole, as filed, does not reasonably establish possession of the claimed invention by appellants. Concerning this matter, we note the description of thin film capacitors having thin film grain sizes similar to film thickness and generally 0.02 to 0.20 microns in size at page 3 of the specification coupled with the disclosure of employing a perovskite material (barium titanate or barium strontium titanate) with lead added thereto (specification, page 3, line 29 through page 4, line 22) so as to ultimately obtain a thin film form material with "grain

sizes typically found in thin films" (specification, page 4, lines 23-28). We also observe that a method wherein the constituents are preferably combined in a solution and calcined in bulk is specified at page 7 of the specification.

The examiner simply has not established why the original disclosure as a whole, including the above noted sections as well as the original claims, would not have reasonably conveyed to one of ordinary skill in the art that as of the filing date of the application, appellants were in possession of the claimed invention. In this regard, we note that appellants' position on this issue (brief, pages 12-17) is not effectively refuted by the examiner in the answer.

For the above reasons, we reverse the rejection under 35 U.S.C. § 112, first paragraph.

Rejection under 35 U.S.C. § 103

The examiner acknowledges that appellants' method differs from Furukawa in that Furukawa does not expressly disclose a method wherein an average grain size of a thin film as herein claimed is obtained (answer, page 5). Nonetheless, the examiner takes the position that "a person having ordinary skill in the art at the time of the claimed invention would

have found it obvious to modify Furukawa's procedure by ensuring that a small grain size was produced because same would have been anticipated to have a higher dielectric constant" (answer, page 5).

We disagree with the examiner's position since Furukawa does not teach or suggest a method of forming a thin film on a substrate having an average grain size as herein claimed. Rather, Furukawa (pages 5 and 6) teaches a method for forming a mixed sintered body wherein a first component mainly comprising barium titanate is combined with a second perovskite component containing lead. A binder and solvent may be used in mixing the components into a slurry and then the slurry is formed into a thick sheet (for example, 30 micron thickness), which sheet is subsequently sintered (Furukawa, page 6). The examiner has not fairly explained how the method of Furukawa reasonably corresponds to appellants' method such that one of ordinary skill in the art would have been led to the here claimed subject matter by the teachings of Furukawa.

Moreover, the examiner's opinion (answer, page 6) that appellants do not challenge the examiner's viewpoints

regarding a skilled artisan's desire to lower grain size to increase the dielectric constant is not persuasive in light of appellants' arguments at pages 9, 11 and 12 of the brief. Rather, it is the motivation relied upon by the examiner that is questionable since it appears to come solely from the description of appellants' invention in their specification. Thus, from this record, we conclude that the examiner used impermissible hindsight when rejecting the claims. See W.L. Gore & Associates v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984); In re Rothermel, 276 F.2d 393, 396, 125 USPQ 328, 331 (CCPA 1960).

Since the examiner has not established how Furukawa would have led one of ordinary skill in the art to appellants' claimed process, we will not sustain the examiner's § 103 rejection.

Provisional Rejection

Our review of Patent and Trademark Office records shows that application No. 08/445,402 is currently abandoned. Since application No. 08/445,402 is no longer copending with the present application, there remains no clear basis on which to

consider an affirmance of the provisional rejection of claims 13 and 15-17 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 13-19 of now abandoned application No. 08/445,402. Accordingly, we procedurally reverse the examiner's provisional obviousness-type double patenting rejection.

CONCLUSION

The decision of the examiner to reject claims 13 and 15-17 under 35 U.S.C. § 112, first paragraph as lacking support in the original specification; to reject claims 13 and 15-17 under
35 U.S.C. § 103 as being unpatentable over Furukawa; and to provisionally reject claims 13 and 15-17 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 13-19 of application No. 08/445,402 is reversed.

REVERSED

BRADLEY R. GARRIS Administrative Patent Judge	)
PAUL LIEBERMAN Administrative Patent Judge	) BOARD OF PATENT APPEALS AND INTERFERENCES
PETER F. KRATZ Administrative Patent Judge	)

PFK/sld

RICHARD A. STOLTZ
TEXAS INSTRUMENTS INCORPORATED
P.O. BOX 655474
M/S 219
DALLAS, TX 75265

APPEAL NO. - JUDGE KRATZ
APPLICATION NO.

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DECISION: **ED**

Prepared By:

DRAFT TYPED: 30 Sep 02

FINAL TYPED: